

Application No. 10/766,736  
Filed: January 28, 2004  
TC Art Unit: 1725  
Confirmation No.: 3473

THE ABSTRACT

Low melting point metallic material is designed to be able to melt with an inclined melting cylinder installed in the condition of combining an injection member with an agitating member therein, and a molten metal is designed to be able to weigh and inject by a plunger, whereby molding accuracy and efficiency can be improved more than a die cast. A injection mechanism 2 is constituted by a melting cylinder 11 which a weighing chamber 17 communicating with a nozzle member 15 is provided on the inside of the tip, agitating and injection means provided in the combined condition in the melting cylinder so as to rotate or, advance or retreat freely and a device driving agitating and injection means, which is arranged on an rear end side of the melting cylinder. The injection mechanism 2 is provided obliquely in a manner that a nozzle member side is directed in a downward direction to a mold clamping mechanism 1. The agitating and injection means is constituted by an agitating member 24 in which agitating wings having a plurality of stripes with an external diameter approximately equal to an inner diameter of the melting cylinder are formed intermittently on an outer periphery of a tip portion of a hollow shaft portion 23 having a through hole at the central position and an injection plunger 30 attached unitarily to a tip of an injection rod 29 inserted into the through hole and provided slidably freely on a central position of the agitating member 21 and provided so as to insert into the weighing chamber 17 freely.

An injection molding machine for low-melting point metallic material has an injection mechanism having a melting cylinder, an

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injection device, and a driving device. The driving device is  
disposed on the rear end of the melting cylinder for driving the  
injection device and includes a pedestal movable to advance and  
retreat freely to support the injection mechanism obliquely. A  
nozzle touch block on a tip end portion of the pedestal is touched  
obliquely by the nozzle member of the melting cylinder. A frame on  
a rear portion of the pedestal supports a rear portion of the  
injection mechanism and the driving device obliquely. A nozzle  
touch device touches an injection nozzle to a mold in the mold  
clamping mechanism by moving the pedestal with the injection  
mechanism toward the mold clamping mechanism.

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